



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,234	10/17/2003	Gary L. Rapp	P07079US2	2475

34082 7590 04/05/2007  
ZARLEY LAW FIRM P.L.C.  
CAPITAL SQUARE  
400 LOCUST, SUITE 200  
DES MOINES, IA 50309-2350

EXAMINER
----------

SCHLIENTZ, NATHAN W

ART UNIT	PAPER NUMBER
----------	--------------

1616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/688,234

Applicant(s)

RAPP, GARY L.

Examiner

Nathan W. Schlientz

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 16-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4 March 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Status of Claims***

Claims 32-42 provide for the use of adipic acid, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. These claims are being construed as "a method for controlling odors comprising administering adipic acid to digestible and odiferous organic waste", for the purposes of grouping the inventions. Appropriate correction of the claims is required to conform to 35 U.S.C. 101.

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-15, drawn to an odor control product, classified in class 424, subclass 76.7.
- II. Claims 16-42, drawn to a method for treating digestible and odiferous organic waste, classified in class 119, subclass 665.
- III. Claim 43, drawn to an odor control system in a portable restroom facility, classified in class 119, subclass 448.

The inventions are distinct, each from the other because of the following reasons:

1. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different

Art Unit: 1616

product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the product as claimed can be used in a materially different process. Adipic acid is commonly used in manufacturing artificial resins, plastics, and urethane foams, as an acidulant in baking powders instead of tartaric acid, cream of tartar and phosphates, as well as an intermediate in lubricating oil additives (The Merck Index, 14<sup>th</sup> Edition; Adipic acid; "Use").

2. Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the portable restroom facility does not require the odor control product adipic acid, alcohol, and water for its proper functioning. Also, known odor-reducing products are currently in use at portable restroom facilities, such as formaldehyde, as taught on page 2, lines 3-12 of the instant specification. The subcombination has separate utility such as the control of odors from organic waste at livestock holding areas, grease storage pits, etc.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in

Art Unit: 1616

accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

3. Inventions II and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process of treating digestible and odiferous organic waste to minimize odors can be practiced by another materially different apparatus or by hand. For instance, the adipic acid, alcohol, and water composition could easily be applied to organic waste through a spray bottle, or any other means for distributing a liquid composition over a desired location.

4. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification and the inventions require a different field of search, restriction for examination purposes as indicated is proper.

***Notice of Possible Rejoinder***

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

***Telephonic Inquiry***

During a telephone conversation with Timothy Zarley, Esq. on 19 March 2007 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-15. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-43 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Therefore, Claims 1-15 are examined herein on the merits for patentability.

***Claim Rejections - 35 USC § 112***

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, Claims 1, 4, 7 and 13-15 recite the term "alcohol". However, "alcohol" is a broad term that encompasses a plethora of patentably distinct species, and the specification does not provide a definition for what compounds are referred to by the use of the term "alcohol". Therefore, it is unclear whether the Applicant intends to include all chemical compounds that contain an OH functional group, or if the Applicant only intends to include ethanol and propanol (as disclosed in the specification) as suitable alcohols. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 1, 3, 5, 6, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,405,354 (hereinafter Thomas et al.) in view of U.S. Patent No. 5,767,054 (hereinafter Sprugel et al.).

**Applicant claims:**

The Applicant claims an odor control product comprising adipic acid, alcohol, and water.

***Determination of the scope and content of the prior art***

**(MPEP 2141.01)**

Thomas et al. teach an ammonia odor control composition consisting essentially of an effective amount of an ammonia control component, such as adipic acid (Claim



Art Unit: 1616

12). Thomas et al. further teach that the ammonia odor control component can be used in a liquid or spray and can vary from about 15 to 100 wt.%, preferably from about 20 to 60 wt.%, and may also include 40 to 85 wt.% water as diluent (column 4, lines 58-66). Also, Thomas et al. teach the ammonia odor control agent can be used in a pellet, at which point it can vary from about 0.5 to 25 wt.%, preferably from about 2 to 10 wt.% (column 5, lines 5, 6 and 15-17).

***Ascertainment of the difference between the prior art and the claims***

**(MPEP 2141.02)**

Thomas et al. do not teach the addition of an alcohol to their ammonia odor control composition. However, Sprugel et al. teach a surface disinfectant and cleaning solution suitable for disinfection of public toilets wherein the solvent is a mixture of water and alcohol, preferably ethanol, propanol, and/or isopropanol, in a ratio of 20:80 to 80:20 (column 3, lines 11-16; column 4, lines 55-59; Example 2; and Claims 1, 5 and 6). Sprugel et al. further teach the alcohol portion of the solvent provides a biocidal effect (column 1, lines 8-18).

**Finding of *prima facie* obviousness**

**Rational and Motivation (MPEP 2142-43)**

Therefore, it would have been *prima facie* obvious for one skilled in the art at the time of the invention to add ethanol or isopropanol to the adipic acid and water of Thomas et al. in a ration of about 80:20 to 20:80 of alcohol to water, because Sprugel et al. teach the alcohol has a biocidal effect which is beneficial when being used on or around public facilities, such as toilets. A person skilled in the art would have been

Art Unit: 1616

motivated to not only control the ammonia odor as taught by Thomas et al., but also disinfect the receptacle at the same time, as taught by Sprugel et al.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

2. Claims 2, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al. and Sprugel et al. as applied to claims 1, 3, 5, 6, 8 and 12 above, and further in view of U.S. Patent 5,736,032 (hereinafter Cox et al.).

**Applicant claims:**

The Applicant claims an odor controlling composition comprising adipic acid, alcohol, water, and eucalyptus oil.

***Determination of the scope and content of the prior art***

**(MPEP 2141.01)**

The teachings of Thomas et al. and Sprugel et al. are discussed above, and are incorporated by herein by reference for brevity.

***Ascertainment of the difference between the prior art and the claims***

**(MPEP 2141.02)**

Thomas et al. and Sprugel et al. do not teach the addition of eucalyptus oil to their odor control or disinfectant compositions. However, Cox et al. teach an

Art Unit: 1616

antimicrobial formulation for treatment of biowaste, such as toilet waste, wherein the odor recharacterizer eucalyptus oil is used to impart an appealing odor or restore an odor of pleasant character (column 22, lines 51-60). Cox et al. further teach the eucalyptus oil used in about 0.70 wt.% (Example IX).

**Finding of *prima facie* obviousness**

**Rational and Motivation (MPEP 2142-43)**

Therefore, it would have been *prima facie* obvious for one skilled in the art at the time of the invention to add eucalyptus oil to the odor controlling composition of Thomas et al. for the purpose of restoring an odor of pleasant character.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

3. Claims 9-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al., Sprugel et al., and Cox et al. as applied to claims 1-8 and 12 above in view of U.S. Patent No. 5,574,093 (hereinafter States et al.).

**Applicant claims:**

The Applicant claims an odor controlling composition comprising adipic acid, alcohol, water, and eucalyptus oil and/or vegetable oil.

***Determination of the scope and content of the prior art***

**(MPEP 2141.01)**

The teachings of Thomas et al., Sprugel et al., and Cox et al. are discussed above, and are incorporated by herein by reference for brevity.

***Ascertainment of the difference between the prior art and the claims***

**(MPEP 2141.02)**

Thomas et al., Sprugel et al., and Cox et al. do not teach the addition of vegetable oil in their odor control compositions. However, States et al. teach an odor controlling composition, useful in controlling ammonia odor, wherein particular utility is the use of vegetable oils such as corn, olive, cottonseed, and linseed oil (column 4, lines 52-57; and column 8, lines 51-53). States et al. further teach the vegetable oil provided the desired results of odor suppression (column 4, lines 54-57).

***Finding of *prima facie* obviousness***

***Rational and Motivation (MPEP 2142-43)***

Therefore, it would have been *prima facie* obvious for one skilled in the art at the time of the invention to incorporate vegetable oil into the odor controlling composition of Thomas et al. because the vegetable oil assists in reducing ammonia odors, as taught by States et al.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to

Art Unit: 1616

one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

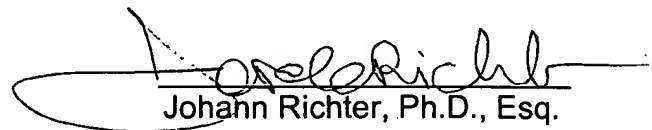
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Schlientz whose telephone number is 571-272-9924. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan W. Schlientz, Ph.D.  
Patent Examiner  
Technology Center 1600  
Group Art Unit 1616

  
Johann Richter, Ph.D., Esq.  
Supervisory Patent Examiner  
Technology Center 1600  
Group Art Unit 1616